CLASSIFICATION CONFIDENTIAL/CONTROL-U.S. OFFICIALS ONLY

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT

CD NO.

25X1

COUNTRY Yugoslavia

DATE DISTR. 29 October 1951

SUBJECT 450 mm. Torpedo-launching Tubes Constructed in the Aleksandar Rankovic Torpedo Factory at Rijeka

NO. OF PAGES 3

25X1

PLACE ACQUIRED

NO. OF ENCLS. 1 (LISTED BELOW)

DATE OF INFO.

SUPPLEMENT TO REPORT NO.

25X1

THIS IS UNEVALUATED INFORMATION

1. Fifty-two 450 mm. torpedo-launching tubes were constructed of an aluminum alloy (silumin) between January 1950 and February 1951. The tubes are composed of six parts, described as follows:

25X1

   a. Four center parts, each 78 centimeters long;
   b. One front part, semi-circular in shape, 230 centimeters long; and
   c. One mobile (removable) base plate, concave; concavity is 20 centimeters deep.

2. The circular crown of the mobile base plate, which seals and makes contact with a similar circular crown on the last of the four center parts, has 16 holes in the form indicated in the attached sketch. When the mobile base plate is in the sealed position the 16 studbolts affixed to the circular crown on the last of the four center parts fit into these holes.

3. Sealing of the mobile base plate is accomplished during rotation of the same, by the pressure brought to bear by the heads of the 16 studbolts while sliding on the inclined walls of the receiving holes.

4. A rack placed under the tube allows it to be turned horizontally 13 degrees. The total weight of the installation is approximately 450 kilograms.

5. The launching group is attached to the rear undersection of the tube and is composed of:

   a. One cylinder A (see attached sketch) which, since it is made of salvaged material, does not have a fixed length;

   b. B, a large launching valve connected to the cylinder; and

   c. A length of pipe tube (tube in form of a pipe) C, connected to the body of the large launching valve on one side, and to the lower rear extremity of the launching tube on the other.

CLASSIFICATION SECRET/CONTROL-U.S. OFFICIALS ONLY

STATE	X	NAVY	X	NSRB		DISTRIBUTION
ARMY	X	AIR	X	FBI		

Document No.

No Change In Class. ☐

☐ Declassified 25X1

Class. Changed To: TS S (C)

Auth.: HR 70-2

Date: 25 AUG 1978 By

25X1

6. The casing of the large launching valve B is connected with the launch-control valve I which is located above the first (semi-) circular front section of the launching tube, by means of a small tube H, 8 mm. in diameter, connected to nipple G-1 of the large launching valve B.

7. Nipple G is attached to the casing of the large launching valve B for charging of the cylinder at 75 kilogram pressure. Nipple G-2 permits introduction of the lubricant. Casing B contains the vertical housing D of large valve E, which is normally (that is, even when completely empty of air), pushed towards its proper seat by a spring. The spring and large valve E are accessible by means of a plug which is screwed to the bottom of casing B. The large valve E has, on one side, a small opening F, 1 millimeter in diameter, which connects cylinder A and the housing of large valve E. In this manner, the air pressure upon the head of large valve E regulates the degree to which it is closed or opened. The source reports that, in the upper part of casing B, immediately above the seat of large valve E, there is a much smaller valve, the functions and purpose of which are unknown to him. There is reason to presume that this valve functions as a by-pass for the charging of cylinder A, and permits the entry of the air contained in cylinder A into a chamber above the seat of large valve E, which therefore is subjected to two counter-pressures. Casing B, as has already been stated, is connected with launch-control valve I. This valve is contained in a metal box situated on top of the first circular section of the tube. The box has a lever L. A backward movement of the lever produces the following:

a. The rising of the catch of the torpedo; and
b. entry of air into the launching tube.

8. The launch-control valve I is composed of a cylinder closed at the bottom by screw plug M, and with the top tapered to a cone. The cylinder is the housing for cup-shaped valve N, the seat of which closes tightly against a round metal ring located at the base of the cone top of the cylinder. Cup-shaped valve N is center-drilled. In the hole fits the shank of a small valve R, with conical trunk, the seat of which fits into a hollow in the head of cup-shaped valve N. Small valve R is held in place by a spring which goes to screw plug M of the cylinder of launch-control valve I. The central hole of cup-shaped valve N leads to two oblique holes in the seat of cup-shaped valve N itself which, with small valve R open, place the bottom part of cylinder of launch-control valve I in communication with the conical top. The vertex of the conical top of the cylinder of launch-control valve I is drilled. In the hole, there is a stem O, the movement of which is controlled by a backward pull on lever L. Immediately under the seat, the cup-shaped valve N is tapered to form between itself and the cylinder of launch-control valve I, a chamber P in the form of a ring. This chamber is in communication with the rear part of the cylinder housing by means of a hole T made obliquely in cup-shaped valve N.

9. Cylinder A discharges air through F, exerts pressure upon the housing of large valve D, and through tube H at nipple G-1. The compressed air then passes into ring-shaped chamber P from which, through opening T, it passes to the rear of the cylinder of launch-control valve I. Large valve E is consequently pressure-sealed against its own seat because of the difference in pressure acting on the head and the seat of large valve E itself.

10. Cup-shaped valve N will also close because of the difference in the pressure on its head and pressure on the circular crown towards its seat.

11. A backward movement of lever L, in addition to freeing the catch of the torpedo as referred above, causes a backward movement of stem O, which then pushes the shank of small valve R, determining the amount that it is opened. In this way, the air contained in the rear of the cylinder of launch-control valve I, passes through the center hole of cup-shaped valve N, the housing for the shank of small valve R and the oblique holes, into the conical top of the cylinder. From there it is discharged into the atmosphere through hole S.

25X1

12. The pressure exerted on the circular crown of cup-shaped valve N, no longer checked by the earlier pressure on the head of the valve, determines the lowering and the consequent aperture of cup-shaped valve N.

13. In this way, the air contained in chamber D of the housing of large valve E, is discharged into the atmosphere through H, and the large valve E, being pushed down by pressure acting on its seat, opens, permitting the discharge of cylinder A through pipe tube C in the rearmost part of the launching tube.

14. Forty of the above 52 launching tubes have been sent to Korcula. The remaining are still in the torpedo factory.